TABLE OF CONTENTS

WTX-D Buoyancy System

COPYRIGHT NOTICE

WARNINGS, CAUTIONS AND NOTES

Pay special attention to information provided in warnings, cautions and notes that are accompanied by one of these symbols:

WARNINGS: Indicate a procedure or situation that may result in serious injury or death if instructions are not followed correctly.

CAUTIONS: Indicate any situation or technique that will result in potential damage to the product, or render the product unsafe if instructions are not followed correctly.

NOTES: *Are used to emphasize important points, tips and reminders.*

SAFETY INFORMATION

This manual provides essential instruction for the proper fitting, adjustment, inspection and care of your new BC. Because Apeks is utilizing patented technology, it is very important to take the time to read these instructions in order to understand and fully enjoy the features that are unique to your specific model. Improper use of this BC could result in serious injury or death.

Before using this buoyancy compensator (BC), you must receive instruction and certification in SCUBA diving and buoyancy control from a recognized training agency. Use of SCUBA equipment by uncertified or untrained persons is dangerous and can result in injury or death.

Read this owner's manual completely before attempting to use your BC, and become familiar with it first in a controlled environment such as a swimming pool, in order to weight yourself properly and to become comfortable with using its many features and adjustments.

Before every dive, perform a complete pre-dive inspection according to the procedure prescribed in this manual, to ensure that all components are functioning properly and no signs of damage or leaks are present. If you find that your BC is not functioning properly or is damaged, remove it from service until it can be repaired by an Authorized Apeks Dealer or Distributor.

Your BC is not a lift bag. **DO NOT** use it to bring heavy objects to the surface. Doing so may cause permanent damage to the BC, and could also result in serious injury or death due to embolism or decompression sickness.

In an emergency such as an out of air situation or uncontrolled descent, it is important to remove and jettison weight immediately. **DO NOT** depend solely on using your BC's power inflator to lift you to the surface.

In the event of an uncontrolled, rapid ascent, it is important to immediately begin venting air from the BC. Continue venting air to slow your ascent rate if neutral buoyancy cannot be reestablished.

DO NOT inhale from your oral inflator. The BC may contain harmful contaminants or gases, which could cause suffocation or injury.

Factory prescribed service for this BC must be performed at least once annually by a factory trained technician who is employed by an Authorized Apeks Dealer or Distributor. Annual service consists of a complete overhaul of the power inflator, and a general air leak inspection of the bladder and valve connections.

Disassembly, repair, or lubrication must not be attempted by persons who are not factory trained and authorized by Apeks. Unauthorized service will render the warranty null and void.

This BC is designed for use with compressed air or Nitrox/EAN (enriched air nitrox) mixtures not exceeding 40% oxygen. Any use of gas mixtures with increased oxygen content or the addition of helium or other substances may cause corrosion, deterioration and/or premature aging of the BC leading to component failure of the metal and rubber parts. The component failures could lead to a loss of buoyancy control and/or pressure integrity of the BC resulting in injury or death. Non-standard breathing mixtures may also present a risk of fire or explosion. The use of Nitrox/EAN requires additional training. Failure to observe this warning may result in injury or death. Use only nitrogen/oxygen mixtures containing no more than 40% oxygen.

This BC conforms to EN 1809: 1998. It has been tested by the National Institute of Professional Diving, Notified Body No. 0078, Entrance No. 3, Port de la Pointe Rouge, 13008 Marseille, France.

TEMPERATURE LIMITATIONS: This BC should be used in temperatures no lower than -4°F (-20°C) and no higher than 150°F (65°C).

WARNING: This is NOT a life jacket: It does not guarantee a head up position of the wearer at the surface. It is not designed to provide face-up flotation in all situations; therefore it does not meet U.S. Coast Guard regulations for a life preserver or personal flotation device (PFD). If you become unconscious in the water without a buddy present to immediately give assistance, you may suffer serious injury or death from drowning.

Your buoyancy compensator is primarily designed to help you maintain neutral buoyancy while in a comfortably balanced, face-down swimming position underwater. It is also designed to provide you with flotation so that you can rest on the surface, but it is not designed to function as a life preserver or personal flotation device (PFD). In order to meet U.S. Coast Guard regulations, a PFD must be designed so that it automatically rights you to a face-up position and holds your head out of the water on the surface. The design characteristics of a personal flotation device are different from those of a buoyancy compensator. The ability of any flotation device to float you in a face-up position can also be affected by other diving equipment you wear, including a cylinder, weight or exposure suit, and whether it can be inflated before you lose consciousness.

For this reason, it is important to always dive with and maintain close proximity to your buddy at all times. Do not depend on any flotation device to hold your face above the surface in the event that you are rendered unconscious in the water while diving.

If you have any questions regarding your Buoyancy Compensator or these instructions, please contact your regional Apeks Dealer or Distributor. Distributor information is available on the Apeks website at: www.apeks.co.uk

WARNING: Although this manual provides some basic guidelines for certain buoyancy control techniques, it is not a substitute for training from a professional diving instructor. Failure to weight yourself properly may create a hazardous condition that could lead to serious injury or death. If you are unsure how to weight yourself in order to achieve optimum buoyancy underwater and on the surface, do not dive until you have obtained the necessary instruction from your diving instructor or an Authorized Apeks Dealer or Distributor.

APEKS WTX HARNESS

Versatility Through Modularity

Apeks' harnesses, buoyancy cells and accessories are fully modular. They can be mixed and matched to create the ideal system for you and the type of diving you choose to do. In addition, it is easy to customize your system by adding or changing out various pieces of hardware. Whether you want a travel friendly rig to dive in the tropics or a solid technical rig to dive deep, Apeks has the right buoyancy configuration for you.

Removable Back Pad

The back pad in the WTX harness is considered optional and can be removed. It is held in place by simple hook and loop.

Backplate Allowances

If desired, the WTX harness gives the option of inserting an Apeks backplate for additional weight or support. The backplate can be inserted directly into a compartment on the harness, therefore does not need hardware or cylinder bands to hold it in place. If you are using nuts and bolts to attach a cylinder or cylinders to the WTX harness, then the backplate must be used.

Dual Cylinder Band Capability

A quick and easy way to attach a single cylinder to the WTX harness is the use of dual universal or GripLock™ cylinder bands. The bands can be run directly through the back of the harness with or without a backplate installed.

> *NOTE: Optional GripLock™ cylinder bands (PN 428240) may be purchased separately for the WTX harness.*

Open Shoulder Design

The 2-inch webbing on the shoulders of the WTX harness is an open design. While the WTX harness comes with a 2-inch angled D-ring on each shoulder, the shoulder can be opened up to change out or add additional hardware.

Crotch Strap

The crotch strap prevents the unit from riding up on the diver's torso while in the water. It also has a front mounted underwater propulsion vehicle "scooter" ring and a 2-inch accessory D–ring in back.

Chest Strap

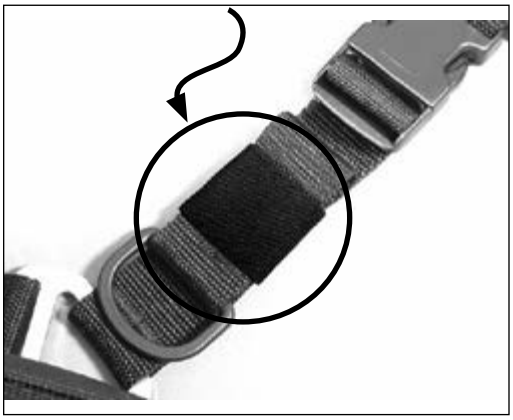
The chest strap fits across your sternum and keeps the two shoulders from slipping to the sides, ensuring a comfortable and secure fit. The chest strap has the option of being removed for those divers who find it unnecessary.

Waistband Grommets

Located alongside each of the waistbands is a set of accessory mounting grommets. These can be used to mount a variety of optional accessories such as the SureLock™ weight system *(releasable weight),* Trim pockets *(non-releasable weight)* or Tek pockets *(for carrying masks, surface markers, etc)*, which may be ordered separately from your Authorized Apeks Dealer. A nut and bolt kit is required for mounting accessories to the grommets.

Retaining Loops

Below each of the shoulder release buckles, there is an elastic retainer loop. These loops can be used to retain excess shoulder webbing or they can be used to retain an accessory such as a small flashlight. There is also a retainer loop located on the crotch strap to retain excess webbing.



Epaulets (Hold-downs)

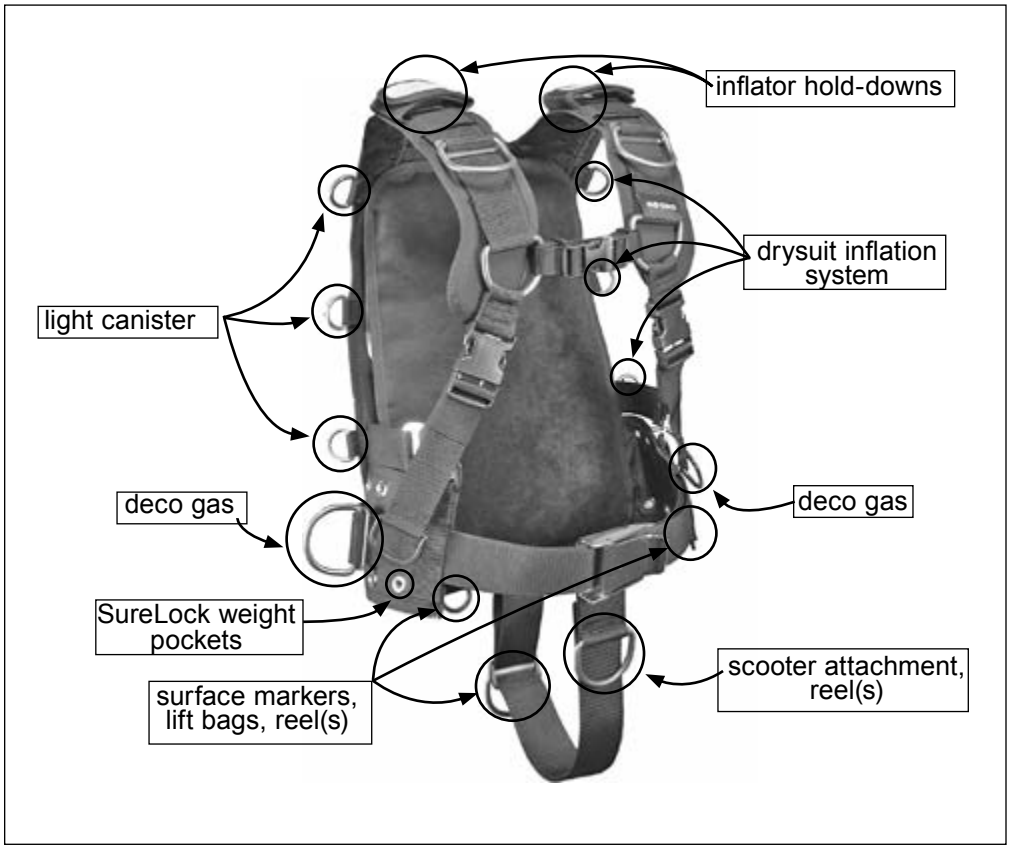
On top of each shoulder are epaulets that hold down the airway(s). Not only do these epaulets hold down the airway(s), they are also SOLAS reflector devices for high visibility. The epaulets are removable and can be repositioned to a new location based upon your needs.

Heavy Duty Metal Waist Buckle

The waistband on the WTX harness is secured in front with a heavy-duty metal waist buckle. The metal buckle can be positioned on either side of the waistband allowing for either a left hand or a right hand release.

Attachment Points

Your WTX harness has many attachment points for your various accessories. These recognized attachment points are shown below along with some of their more common uses.



APEKS WTX-D BUOYANCY CELLS

To complement your harness, Apeks manufactures a wide variety of WTX-D buoyancy cells to fit your diving needs. You may choose from the following options:

- 18 lb, 30 lb & 40 lb single cylinder buoyancy cell.
- 45lb & 60lb twin cylinder buoyancy cell.
- 60lb redundant twin cylinder buoyancy cell.

WTX-D buoyancy cells have a flow-through design that allows for a more even distribution of air compared to more traditional buoyancy cells. The bladder and outer bag are constructed from a rugged, fade-resistant material that will stand up to the most extreme diving conditions. A urethane coating on the bladder and outer bag prevents excess water retention, allowing water to bead right off.

All WTX-D buoyancy cells come equipped with the following features:

Mesh Drain and Grommets

A mesh drain and grommets will prevent water from pooling in the bottom of the buoyancy cell.

Flat Valve / Dump Valve / Over Pressure Relief (OPR) Valve

Each buoyancy cell comes with a flat valve / dump valve located on the left rear inside of the outer bag. This easy-to-reach dump valve is convenient for releasing air while inverted and is more streamlined when compared to a standard dump valve. The over pressure relief (OPR) valve feature allows excess air to vent from the valve when the bladder is full, preventing damage to the buoyancy cell.

Elliptical Corrugated Hose

The Apeks technical airway found on each buoyancy cell includes a corrugated hose that has an elliptical cross section. This allows for a lower profile, which reduces drag and lays cleanly over the shoulder. A retainer loop comes installed on the elliptical hose to streamline the braided MP hose.

Safety Cable in the Airway

A safety cable can be found inside the corrugated hose of each Apeks technical airway. This safety cable protects the corrugated hose from hyper-extension and tearing that can be caused by any undue stresses such as snags.

Heavy Duty Inflator with Brass Buttons

Technical diving equipment must be robust and reliable. Apeks' new technical inflator exceeds the challenge. The secret to its reliability is its simplicity. Fewer parts mean less to go wrong and ease of service. Once you hold the precision marine brass buttons in your hand, you will quickly realize that this is not a recreational inflator, but rather a serious tool to meet the dive at hand.

Braided MP Inflator Hose

The Apeks technical airway comes equipped with a light weight, braided MP inflator hose. This gives the airway greater flexibility for inflation / deflation of the buoyancy cell compared to standard MP inflator hoses that can be cumbersome and difficult to maneuver.

Side Panels for Additional Lift Capacity

Side panels allow the buoyancy cell to expand and provide additional lift capacity without increasing the overall size.

Oval Grommets for Dual Cylinder Bands

Each buoyancy cell incorporates four oval slots. These allow the buoyancy cell to be mated directly to the WTX harness, WTX backplate or ultralight plate with the use of two universal or GripLock™ cylinder bands.

Loops for Optional Retractor Kit

The outer bag has loops sewn to the inside for an optional retractor kit. The retractors will assist in keeping the buoyancy cell streamlined while diving. The retractor kit may be ordered separately from your Authorized Apeks Dealer. Instructions for attachment are included with the retractor kit.

NOTE: WTX-D18 buoyancy cell does not have loops sewn to the inside of the outer bag, therefore cannot accommodate the retractor kit.

WTX-D SINGLE CYLINDER BUOYANCY CELL

CAUTION: Please note that the 18 lb, 30 lb and 40 lb buoyancy cells are intended for use with single cylinders only and are not intended to be used with twin cylinders.

Multiple Metal Grommets for Book Screw Kit

Each buoyancy cell has two sets of central metal grommets that give you the option of mounting book screws. These may be used to secure the WTX harness, WTX backplate or ultralight plate to the buoyancy cell, preventing excessive movement between the two components.

- WTX harness use 3/4” book screw kit *(PN 388113, sold separately).*
- Ultralight plate and WTX backplate use 3/8” book screw kit *(PN 388112, sold separately).*

Tank Stabilizer

Each buoyancy cell comes with a tank stabilizer located between the oval grommets. This feature prevents the tank from rolling side to side, allowing it to stay in its intended position.

Multiple Metal Grommets for Nut and Bolt Attachment

Single cylinder buoyancy cells also have multiple sets of central metal grommets that give you the option of mounting with nuts and bolts. These may be used if your single cylinder is equipped with a single cylinder adapter that has two bolts 11 inches (28 cm) apart on center.

WTX-D TWIN CYLINDER BUOYANCY CELL

Multiple Grommets for Nut and Bolt Assembly

Twin cylinder buoyancy cells have three grommets near the top of the center panel and a corresponding oval grommet near the bottom of the center panel. The three grommets allow the diver a choice of three height adjustment settings to achieve proper trim of the buoyancy cell. Rather than have the lower bolt line up perfectly with a lower hole as other brands require, the oval grommet accommodates bolts that are slightly out of position.

> *NOTE: The lower oval grommet in-line with the three upper grommets is used for twin cylinder nut and bolt assemblies.*

Narrow at Top for Full Access to Valves and Regulators

Apeks buoyancy cells are designed to be slim at the top to allow the diver's head to tilt back, encourage proper hose placement and to assure that the diver has easy access to the manifold valves.

WTX-D TWIN CYLINDER REDUNDANT BUOYANCY CELL

> *NOTE: In the following description, the term "front" refers to the bladder closest to the diver when wearing. The term "rear" refers to the bladder furthest away from the diver when wearing.*

> *NOTE: The WTX-D 60R has all the same features as the WTX-D 45 and WTX-D 60, with the following additions:*

Dedicated Inflator for each Bladder

The left side inflator is for the front bladder and the right side inflator is for the rear bladder.

Independent Bladder Pull Dump / Over Pressure Relief (OPR) Valve

Each bladder comes standard with a single lower flat valve / pull dump. The left front pull dump is for the front bladder and the right rear pull dump is for the rear bladder. The easy-to-reach dump valves are convenient when dumping air while in a horizontal or inverted position.

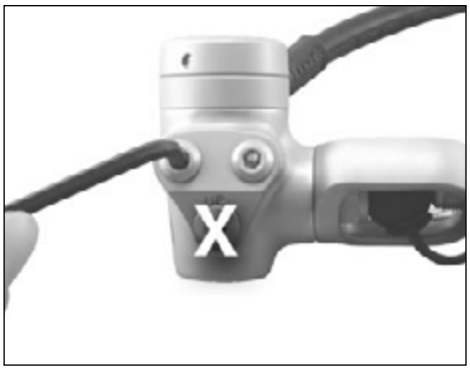
ATTACHING THE MP HOSE TO THE FIRST STAGE

Apeks recommends that you bring your buoyancy compensator, together with your regulator, to your authorized dealer for the installation of the MP inflator hose and other accessories. The retailer can also answer any questions you may have pertaining to the information in this manual.

If it is not possible to return the BC with your regulator to your authorized dealer, you may install the MP quick disconnect inflator hose by carefully performing the steps in the following procedure.

1. Remove the inflator hose from the power inflator body by gripping the grooved sleeve over the quick disconnect coupling with your thumb and forefinger. Slide the sleeve back.

2. Remove the port plug from an MP port on the regulator using an appropriately sized wrench.



WARNING: DO NOT connect the inflator hose to a high pressure (HP) port (greater than 200 psi / 14 bar). This may cause the hose to burst when pressurized, which can result in serious injury. If you are unsure which regulator port is medium pressure (MP) or high pressure (HP), consult your regulator owner's manual or your dealer before attaching the hose.

3. Check to ensure the o-ring is present and in good condition. Screw the threaded end of the hose into the port and tighten to 40 in-lbs (4.5 Nm) with a 9/16" wrench.

MOUNTING A WTX-D BUOYANCY CELL USING THE WTX HARNESS AND UNIVERSAL CYLINDER BANDS

> *NOTE: The terms "Hook & Loop" are used throughout this manual. Hook & Loop is commonly known as Velcro®, which is a trademarked brand of hook & loop. Some of the BC components have hook & loop attachments, including the cylinder band, weight pouch flaps and inflator hold down.*

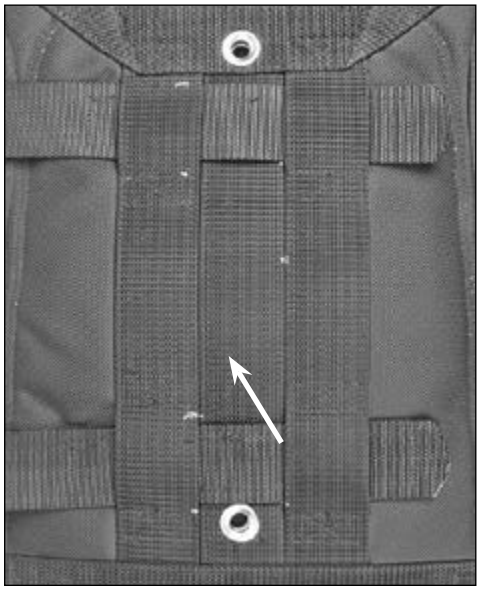
> *NOTE: The WTX harness can accommodate single or twin cylinder WTX-D buoyancy cells.*

A buoyancy cell may be attached directly to an Apeks WTX harness using universal cylinder bands. Using optional 3/4" book screws *(PN 388113, sold separately)* will help keep the buoyancy cell and WTX harness held together while assembling the cylinder bands.

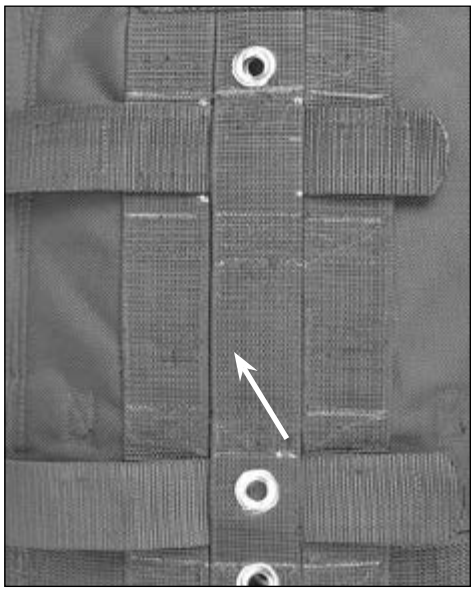
1. Set the buoyancy cell on a flat surface with the zipper side face up. Insert the cylinder band through the upper left oval grommet hole with the hook and loop side of the band facing down towards the buoyancy cell.

NOTE: You must have a current model WTX harness that has the center webbing loop in order to use a WTX-D single cylinder buoyancy cell. The original WTX harness does not have a center webbing loop and, therefore it is not compatible with a WTX-D single cylinder buoyancy cell.

NOTE: The original and current WTX harness are compatible with all WTX-D twin cylinder buoyancy cells.



Original WTX Harness
No Center Webbing Loop



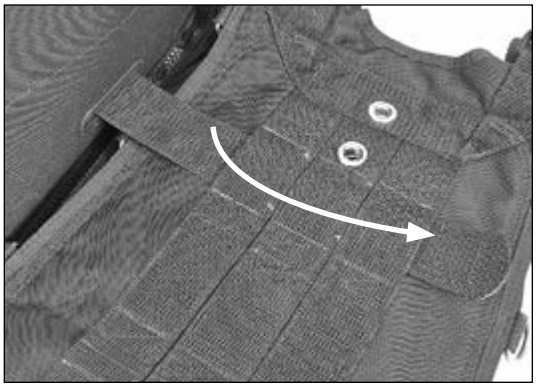
Current WTX Harness
Center Webbing Loop

CAUTION: The cylinder bands must be run through the center webbing loop only on the WTX harness when using a WTX-D single cylinder buoyancy cell. Trying to configure the cylinder bands differently can cause damage to the buoyancy cell which is not covered by warranty.

2. Use the following procedure for attaching the cylinder band to the harness:

- If using a WTX-D single cylinder buoyancy cell, insert the band through the ***center web loop*** on the WTX harness.
- If using a WTX-D twin cylinder buoyancy cell, insert the band through all ***three web loops*** on the WTX harness.

WTX-D Single Cylinder Buoyancy Cell to Harness Band Configuration



WTX-D Twin Cylinder Buoyancy Cell to Harness Band Configuration

3. Bring the cylinder band end around and exit through the upper right oval grommet hole on the buoyancy cell. Slide the traction sleeve *(included with the WTX harness)* onto the open end of the cylinder band with the ribbed side facing toward the cylinder.

NOTE: Apeks recommends using traction sleeves with universal cylinder bands as added security to keep the cylinder from slipping during the course of a dive.

4. Repeat the process for the lower cylinder band.

See the following section to finish attaching the WTX-D system to a cylinder:

- ***Universal Cylinder Band Setup***

MOUNTING A WTX-D BUOYANCY CELL USING THE ULTRALIGHT PLATE AND UNIVERSAL CYLINDER BANDS

CAUTION: The ultralight plate can accommodate WTX-D single cylinder buoyancy cells only. DO NOT attempt to use it with WTX-D twin cylinder buoyancy cells.

A buoyancy cell may be attached directly to an Apeks ultralight plate using universal cylinder bands. Using optional 3/8" book screws *(PN 388112, sold separately)* will help keep the buoyancy cell and ultralight plate held together while assembling the cylinder bands.

1. Set the buoyancy cell on a flat surface with the zipper side face up. Insert the cylinder band through the upper left oval grommet hole with the hook and loop side of the band facing down towards the buoyancy cell.

2. Turn the buoyancy cell over and place the ultralight plate on top with the Apeks logo face up. Insert the cylinder band end through the oval grommet hole in the ultralight plate on the same side. Bring the cylinder band end around the plate and exit the oval grommet holes on the upper right side. Make sure the cylinder band passes through both the ultralight plate and buoyancy cell grommet holes.

3. Turn the buoyancy cell back over, so the zipper side is face up. Slide the traction sleeve *(PN 10017, sold separately)* onto the open end of the cylinder band with the ribbed side facing toward the cylinder.

NOTE: Apeks recommends using traction sleeves with universal cylinder bands as added security to keep the cylinder from slipping during the course of a dive.

4. Repeat the process for the lower cylinder band.

See the following section to finish attaching the WTX-D system to a cylinder:

- ***Universal Cylinder Band Setup***

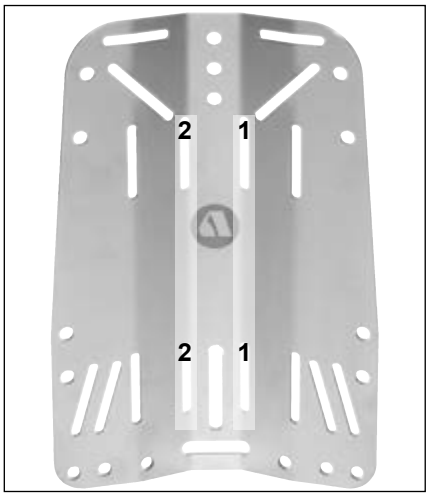
MOUNTING A WTX-D BUOYANCY CELL USING THE WTX BACKPLATE AND UNIVERSAL CYLINDER BANDS

NOTE: The WTX backplate can accommodate WTX-D single or twin cylinder buoyancy cells.

A buoyancy cell may be attached directly to a WTX backplate using universal cylinder bands. Using optional 3/8” book screws (*PN 388112, sold separately)* will help keep the buoyancy cell and backplate held together while assembling the cylinder bands.

1. Set the buoyancy cell on a flat surface with the zipper side face up. Insert the cylinder band through the upper left oval grommet hole with the hook and loop side of the band facing down towards the buoyancy cell.

2. Identify the two upper and lower vertical slots in the center of the WTX backplate at the top and bottom.



3. Turn the buoyancy cell over and place the WTX backplate on top with the Apeks logo face up. Insert the cylinder band into slot 1, bring it around the plate and out slot 2. After exiting slot 2, direct the cylinder band out the upper right oval grommet hole on the buoyancy cell. Make sure the cylinder band passes through both slots in the plate and buoyancy cell grommet holes.

4. Turn the buoyancy cell back over, so the zipper side is face up. Slide the traction sleeve *(PN 10017, sold separately)* onto the open end of the cylinder band with the ribbed side facing toward the cylinder.

NOTE: Apeks recommends using traction sleeves with universal cylinder bands as added security to keep the cylinder from slipping during the course of a dive.

5. Repeat the process for the lower cylinder band.

See the following section to finish attaching the WTX-D system to a cylinder:

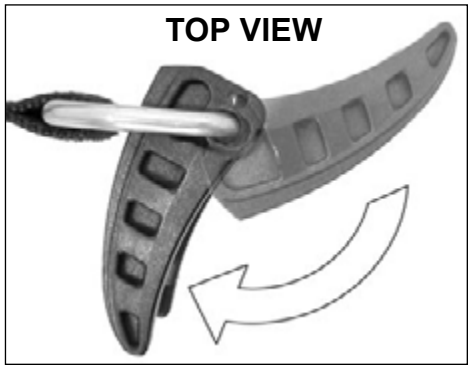
- ***Universal Cylinder Band Setup***

UNIVERSAL CYLINDER BAND SETUP

Threading the Cam Buckle

1. Firmly grasp the metal D-ring with your left hand.

2. While firmly holding the metal D-ring, rotate the buckle back towards the webbing. The buckle should form an angle with the metal D-ring as shown in the top view.



3. Insert band through the metal D-ring, then through the middle slot of the buckle.

4. Insert band through the inside slot of the buckle.

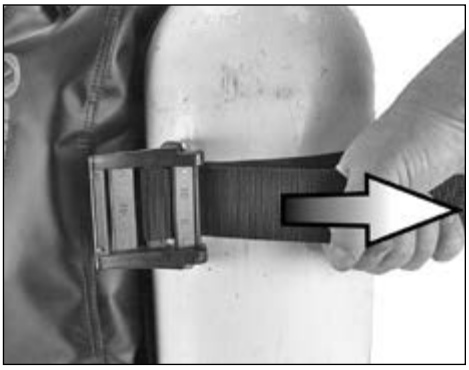
Securing the Universal Cylinder Band

NOTE: Universal cylinder bands adjust for all standard cylinder diameters.

WARNING: The cylinder band will initially stretch as it becomes wet. Always wet the band before making the final adjustment; apply enough tension to ensure that the cylinder is completely secure. Test this connection before every dive. If the cylinder slips free from the BC during the dive, you may loose your air supply, which could lead to serious injury or death.

1. Slide the cylinder bands over the cylinder so that the BC is at the desired position in relation to the cylinder valve. Make sure the cylinder valve air outlet is facing the back of the BC. Secure the upper cylinder band first to check for proper cylinder placement.

2. While holding the cylinder secure, pull the free end of the upper cylinder band webbing until there is a very tight fit between the plate and the cylinder.



3. Close the buckle halfway to hold the cylinder band taut, and thread the free end of the band through the open slot in the end of the buckle.

4. Pull the cam buckle closed so that it lies flat against the cylinder. Secure the end of the cylinder band with the hook & loop attachment.

5. Repeat process for lower cylinder band.

6. Check the cylinder band is secure by pulling on the band while holding down the cylinder at the valve. If the cylinder band moves, it is too loose. Repeat steps 1-5.

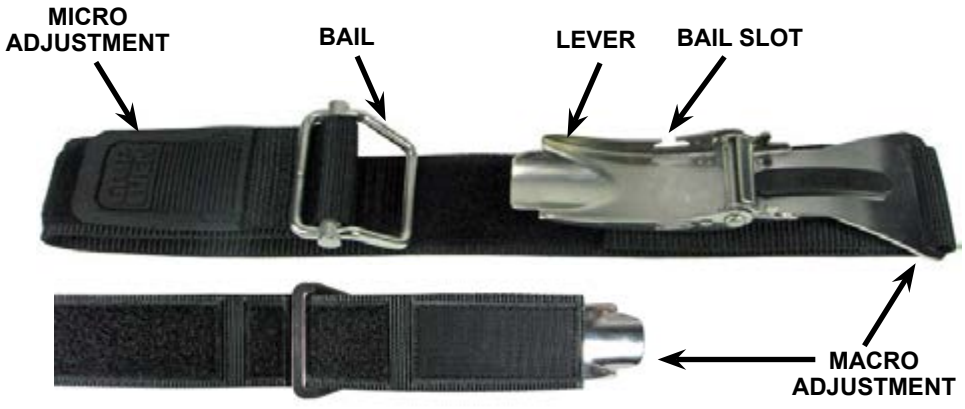
WARNING: Verify the tension of the cylinder band prior to every dive. Failure to do so may result in the cylinder slipping during the course of a dive.

MOUNTING A WTX-D BUOYANCY CELL USING THE WTX HARNESS AND GRIPLOCK™ CYLINDER BANDS

A buoyancy cell may be attached directly to an Apeks WTX harness using GripLock™ cylinder bands. Using optional 3/4" book screws *(PN 388113, sold separately)* will help keep the buoyancy cell and WTX harness held together while assembling the cylinder bands.

> *NOTE: The WTX harness can accommodate WTX-D single or twin cylinder buoyancy cells.*

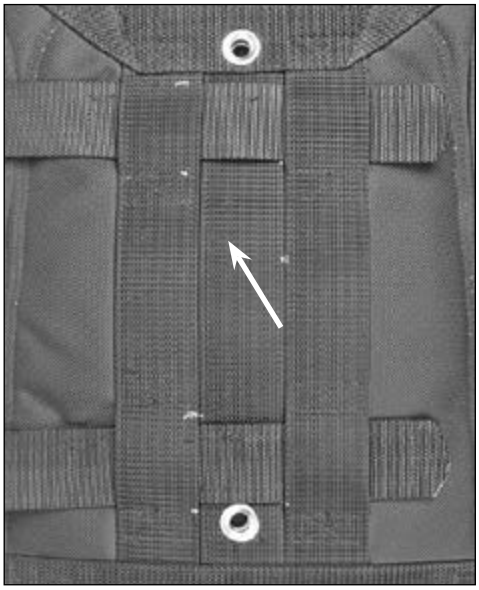
GripLock™ Cylinder Band Components



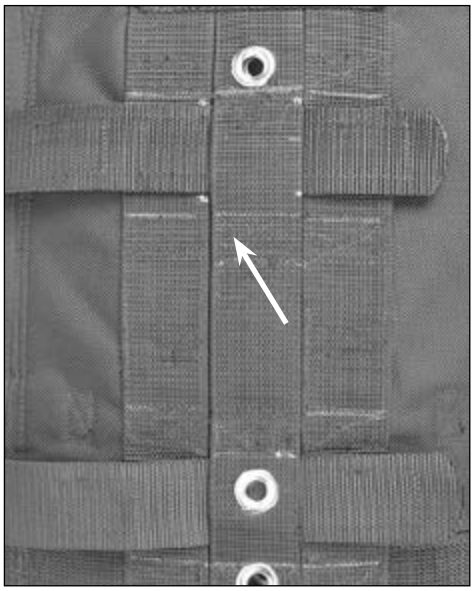
1. Set the buoyancy cell on a flat surface with the zipper side face up. Remove the bail from the cylinder band. Insert the GripLock™ band through the upper right oval grommet hole with the GripLock™ patch facing up.

NOTE: You must have a current model WTX harness that has the center webbing loop in order to use a WTX-D single cylinder buoyancy cell. The original WTX harness does not have a center webbing loop and, therefore it is not compatible with a WTX-D single cylinder buoyancy cell.

NOTE: The original and current WTX harness are compatible with all WTX-D twin cylinder buoyancy cells.



Original WTX Harness
No Center Webbing Loop



Current WTX Harness
Center Webbing Loop

CAUTION: The cylinder bands must be run through the center webbing loop only on the WTX harness when using a WTX-D single cylinder buoyancy cell. Trying to configure the cylinder bands differently can cause damage to the buoyancy cell which is not covered by warranty.

2. Use the following procedure for attaching the cylinder band to the harness:

- If using a WTX-D single cylinder buoyancy cell, insert the band through the ***center web loop*** on the WTX harness.
- If using a WTX-D twin cylinder buoyancy cell, insert the band through all ***three web loops*** on the WTX harness.

WTX-D Single Cylinder Buoyancy Cell to Harness Band Configuration

WTX-D Twin Cylinder Buoyancy Cell to Harness Band Configuration

3. Bring the cylinder band end around and exit through the upper left oval grommet hole on the buoyancy cell.

4. Repeat the process for the lower cylinder band.

See the following section to finish attaching the WTX-D system to a cylinder:

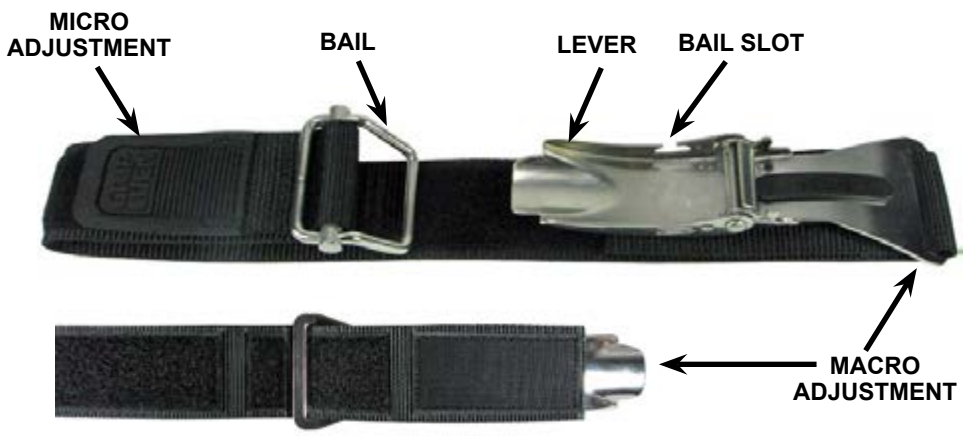
- ***GripLock™ Cylinder Band Setup***

MOUNTING A WTX-D BUOYANCY CELL USING THE ULTRALIGHT PLATE AND GRIPLOCK™ CYLINDER BANDS

CAUTION: The ultralight plate can accommodate WTX-D single cylinder buoyancy cells only. DO NOT attempt to use it with WTX-D twin cylinder buoyancy cells.

A buoyancy cell may be attached directly to an Apeks ultralight plate using GripLock™ cylinder bands. Using optional 3/8" book screws *(PN 388112, sold separately)* will help keep the buoyancy cell and ultralight plate held together while assembling the cylinder bands.

GripLock™ Cylinder Band Components



1. Set the buoyancy cell on a flat surface with the zipper side face up. Remove the bail from the cylinder band. Insert the GripLock™ band through the upper right oval grommet hole with the GripLock™ patch facing up.

2. Turn the buoyancy cell over and place the ultralight plate on top with the Apeks logo face up. Insert the cylinder band end through the oval grommet hole in the ultralight plate on the same side. Bring the cylinder band end around the plate and exit the oval grommet holes on the upper left side. Make sure the cylinder band passes through both the ultralight plate and buoyancy cell grommet holes.

3. Turn the buoyancy cell back over, so the zipper side is face up.

4. Repeat the process for the lower cylinder band.

See the following section to finish attaching the WTX-D system to a cylinder:

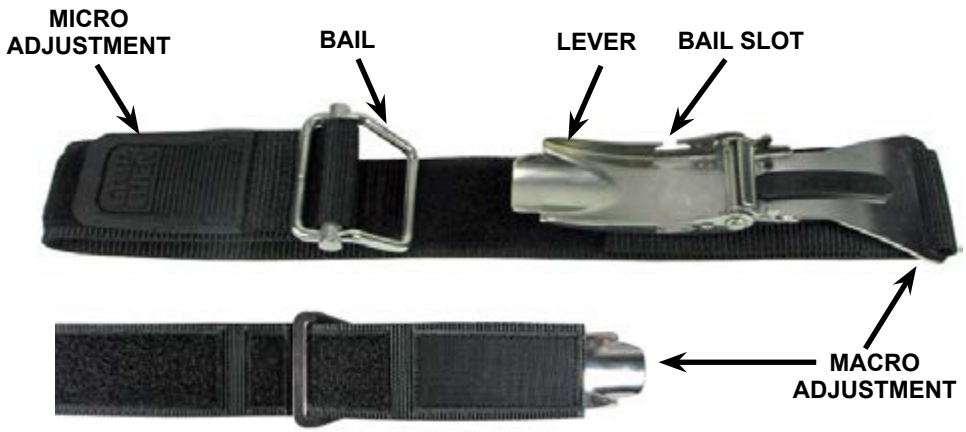
- ***GripLock™ Cylinder Band Setup***

MOUNTING A WTX-D BUOYANCY CELL USING THE WTX BACKPLATE AND GRIPLOCK™ CYLINDER BANDS

> *NOTE: The WTX backplate can accommodate WTX-D single or twin cylinder buoyancy cells.*

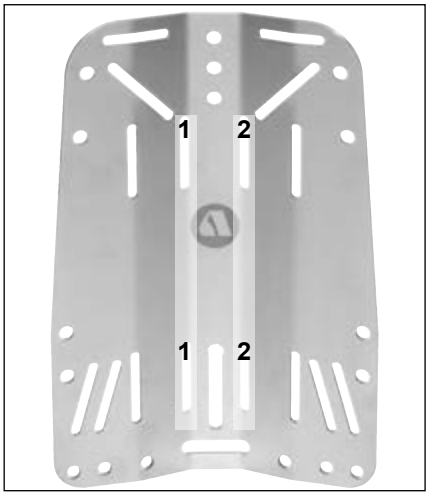
A buoyancy cell may be attached directly to a WTX backplate using GripLock™ cylinder bands. Using optional 3/8” book screws *(PN 388112, sold separately)* will help keep the buoyancy cell and backplate held together while assembling the cylinder bands.

GripLock™ Cylinder Band Components



1. Set the buoyancy cell on a flat surface with the zipper side face up. Remove the bail from the cylinder band. Insert the GripLock™ band through the upper right oval grommet hole with the GripLock™ patch facing up.

2. Identify the two upper and lower vertical slots in the center of the WTX backplate at the top and bottom.



3. Turn the buoyancy cell over and place the WTX backplate on top with the Apeks logo face up. Insert the cylinder band into slot 1, bring it around the plate and out slot 2. After exiting slot 2, direct the cylinder band out the upper left oval grommet hole on the buoyancy cell. Make sure the cylinder band passes through both slots in the plate and buoyancy cell grommet holes.

4. Turn the buoyancy cell back over, so the zipper side is face up.

5. Repeat the process for the lower cylinder band.

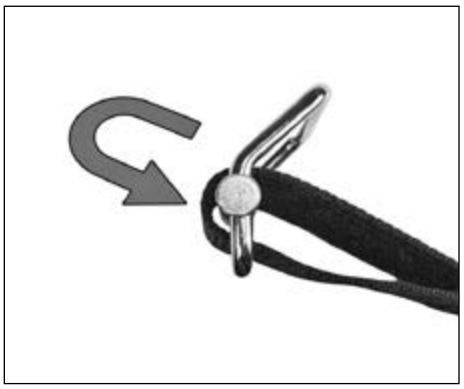
See the following sections to finish attaching the WTX-D system to a cylinder:

- ***GripLock™ Cylinder Band Setup***

GRIPLOCK™ CYLINDER BAND SETUP

Threading the GripLock™ Cylinder Band

Insert the open end of the cylinder band into the large opening of the bail, around the slide bar and out the small opening of the bail. Secure the hook and loop on the band to hold the bail in place.



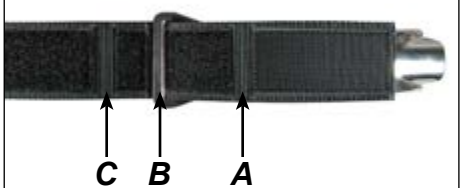
Adjusting the GripLock™ Cylinder Band

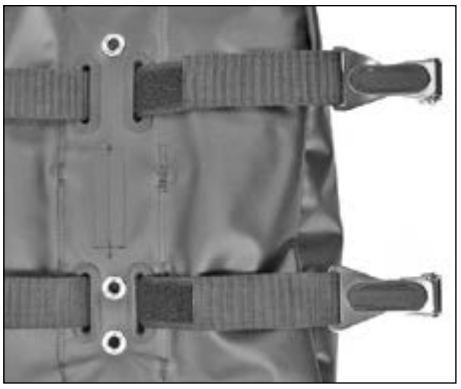
WARNING: The buoyancy cell must be completely deflated of air before adjusting the GripLock™ cylinder band. Failure to do so may result in the cylinder slipping during the course of a dive.

NOTE: *The GripLock™ cylinder band adjusts for all standard cylinder diameters and is ready for use with an aluminum 80 cf (7.25 inch / 184 mm) cylinder when it leaves the factory.*

There are three diameter settings for cylinder size ***A. large cylinder B. AL 80 cf (7.25 in / 18.5 cm) C. smaller cylinder***. Adjust the macro adjustment for the proper size cylinder. Secure hook and loop after cylinder size is selected.

Macro Presets





Securing the GripLock™ Cylinder Band

NOTE: There is no need to wet the GripLock™ cylinder band prior to securing it to the cylinder. When properly adjusted, the cylinder band will retain its tension. If adjustment is necessary for a larger or smaller size cylinder (pre-set for use on an aluminum 80 cf cylinder 7.25 inch / 184 mm), follow the procedure in the section: ***Adjusting the GripLock™ Cylinder Band.***

WARNING: Check that the macro adjustment is set for the appropriate size cylinder. Failure to do so may result in the cylinder slipping during the course of a dive.

NOTE: Pull the micro adjustment ***only until it is snug*** *against the cylinder. If the lever is difficult to close, the micro adjustment is too tight. Loosen the micro adjustment and close the lever to secure the GripLock™ band to cylinder. If it is difficult to remove the GripLock™ band from the cylinder, this is an indicator that the micro adjustment was too tight when installed.*

1. Make sure the cylinder valve air outlet is facing the back of the BC. Secure the upper GripLock™ band first to check for proper cylinder placement followed by the lower GripLock™ band. For optimum cylinder retention, center the GripLock™ buckle assembly on the curve of the cylinder. Connect the bail into the bail slot of the lever. Hold the lever and pull the GripLock™ patch end of the webbing to tighten the micro adjustment. Secure the hook and loop webbing on the micro adjustment.

2. Push the lever forward until it stops in the ***pre-locked position*** (this keeps your fingers from being caught in the lever). Push the lever down into the ***locked position***. Verify the lever is secured in the ***locked position***. Once the cylinder band is set up, further adjustment is typically not needed. Repeat procedure to secure lower cylinder band.

3. Check that the cylinder band is secure by pulling on the band while holding down the cylinder at the valve. If the cylinder band moves, it is too loose. Check that the macro adjustment is set for the correct size cylinder and repeat steps 1 & 2.

WARNING: Verify the tension of the cylinder band prior to every dive. Failure to do so may result in the cylinder slipping during the course of a dive.

Click here for an instructional video on ***GripLock™ Tank Band System***

MOUNTING SINGLE OR TWIN CYLINDERS USING NUTS AND BOLTS

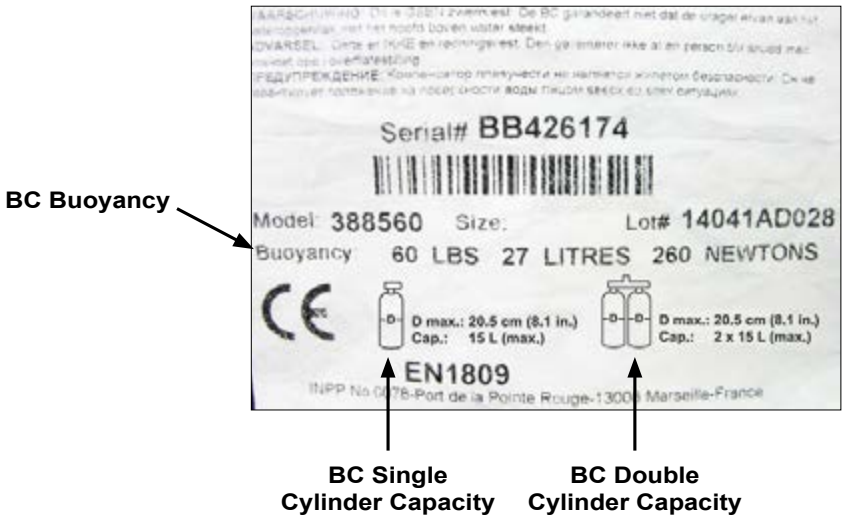
Inserting a backplate into the WTX Harness will allow divers to set up a single or twin cylinder system using nuts and bolts. Single or twin cylinder(s) can also be bolted directly to the Apeks backplate. Ideally, the bolts on a single tank adapter or a set of twin bands should be 11 inches (28 cm) apart on center. Insert the bolts through the appropriate grommets on the buoyancy cell, and through the corresponding grommets or bolt holes on the WTX harness or Apeks backplate. Secure with flat washer and nut.

Inserting an Apeks Backplate into a WTX Harness

To insert an Apeks backplate, remove the back pad and fold down the hook and loop tab at the bottom of the harness. Lift open the built in pouch and slide the backplate in as far as it will allow. Close the pouch and secure by repositioning the hook and loop tab. Replace the back pad if desired.

BC Buoyancy and Cylinder Capabilities

Each BC has a tag in one of the following locations: inside the BC pocket, on the inward side of the harness or inside the outer bag of the buoyancy cell. This tag contains specific information regarding the characteristics of your particular model BC, such as buoyancy and cylinder capabilities. It is important to review this information in order to know the proper cylinder sizes that may be used (single and double cylinders) and to ensure the amount of weight being used does not exceed the buoyancy of the BC.



NOTE: *The BC tag above is an example only. Reference the specific tag located on your model BC.*

WTX-D Buoyancy System	
WTX-D Buoyancy Cell	**Cylinder Capacity**
WTX-D 18	D max.: 20.5 cm (8.1 in.) Cap.: 15 L (max.)
WTX-D 30	
WTX-D 40	
WTX-D 45	D max.: 20.5 cm (8.1 in.) Cap.: 15 L (max.) D max.: 20.5 cm (8.1 in.) Cap.: 2 x 15 L (max.)
WTX-D 60	
WTX-D 60R	

Double Cylinder Set-up

Before adapting your BC for use with double cylinders, it is important to compare the buoyancy of your particular BC size and model with the specifications of the cylinders, the amount of weight you will carry, and the type of exposure suit you will wear.

Your BC's backpack or harness may also have certain weight limitations depending on the size and model, as double cylinders vary in both size and weight. To ensure your safety, refer to the ***BC Buoyancy and Cylinder Capabilities section of this manual*** prior to attaching double cylinders to confirm the approved double cylinders for your particular BC.

Select BC's can accommodate an Apeks Twin Tank Kit. Consult your local Apeks Dealer or Distributor for more information. Dealer or Distributor and product information can be found on the Apeks website at **www.apeks.co.uk**

WARNING: When fully charged and worn together as doubles, some cylinders may create enough negative buoyancy to counteract the amount of buoyancy your BC can provide. At depth, this can lead to a dangerous situation if your wetsuit becomes compressed and you can no longer achieve positive buoyancy by jettisoning weight. The excess weight of some twin cylinders may also lead to structural failure of the backpack or harness. Such an event while diving may separate you from your primary air source, and could lead to serious injury or death.

DONNING AND ADJUSTMENT PROCEDURES

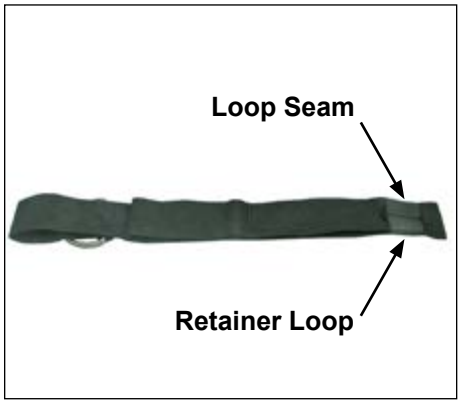
1. If you have the optional SureLock™ weight system on your harness, remove the weight pouches from their holsters.
2. Loosen and disconnect the waist buckle and chest strap (if equipped).
3. Ensure that the quick release buckles (if equipped) on both torso straps are securely fastened. While firmly holding the torso strap where it connects to the harness, fully extend each torso strap to its maximum length by pushing straight up on the slide buckle.
4. While your dive buddy stabilizes the system behind you, place your arms through the harness torso straps as if you were putting on a jacket.
5. Place the free end of the waistband webbing through the loop in the crotch strap (if equipped). Fasten the waist buckle. It should be snug enough that the weight of the cylinder(s) should rest on the lumbar region (lower part) of your back.
6. Connect the chest strap (if equipped). Pull on the free end of the strap to tighten. The chest strap should feel comfortable across the chest; it should not be over-tightened so that it feels restrictive.
7. After your buddy has released the cylinder(s) and the harness feels comfortably supported on your hips and shoulders, bend forward at the waist and adjust the torso straps to a comfortable length by pulling on the torso strap D-rings (if equipped).

> *NOTE: Adjusting the shoulder straps too tightly will transfer the cylinder(s) weight from the hips to the shoulders, restricting your arm movement and decreasing comfort.*

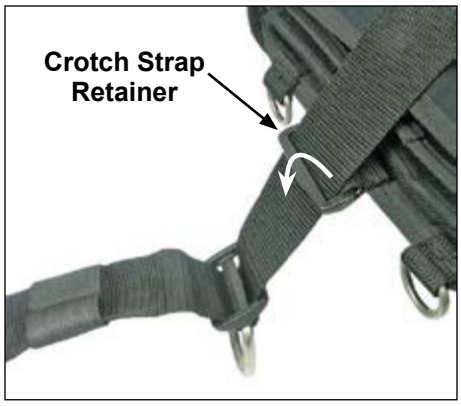
8. If necessary, readjust the waistband and waist buckle so that they are comfortably snug, but not restricting.

Attaching the Crotch Strap to WTX Harness

1. Install **retainer loop** onto the non-looped end of the webbing with loop seam facing inward. Place the flat end of the d-ring on the angled side of the plastic 3-bar slide. Weave the webbing through, starting from the top side of the plastic 3-bar slide as shown below.



2. Place the WTX harness with the Apeks logo (on the backpad) face up on a flat surface. Feed the webbing bottom to top through the plastic sewn in **crotch strap retainer** on the bottom of the WTX harness.



3. Wrap the webbing around the **crotch strap retainer** and back through the 3-bar slide and d-ring (now containing two strands of webbing). Adjust the crotch strap to desired length and tighten when finished. The extra webbing (tail) can be inserted and secured in the retainer loop.

Adjusting the Crotch Strap

The crotch strap is adjusted by moving the 2 inch webbing through the 3-bar slide near the back. The crotch strap should be tried on and adjusted while wearing your exposure suit. The strap should be lightly snug but not so snug as to prevent you from raising your arms above your head. Excess strapage can be cut with scissors and the end burned with a lighter to prevent unraveling, or it can be tucked into the elastic retainer loop.

> *NOTE: Do not cut the excess webbing so short that you cannot enlarge it in the future to compensate for a thicker exposure suit.*

Positioning the Waist Buckle

The metal waist buckle can be mounted on either side of the waistband.

If you would like to switch the buckle to the other side, weave the buckle as shown. Don the WTX harness with cylinder(s) and your normal exposure suit. Run the 2-inch waistband through the buckle so that the buckle will be positioned where you like.

Excess webbing may be cut with scissors and the end burned with a lighter to prevent unraveling.

> *NOTE:* Do not cut the excess webbing so short that you cannot enlarge it in the future to compensate for a thicker exposure suit.

Customizing the Shoulder Hardware

1. Remove epaulets from the shoulder strap webbing.

2. Unweave webbing from 3-bar plastic slide and rectangular plastic loop.

3. Remove 3-bar plastic slide from webbing. Pull webbing out from sewn-in shoulder strap loop.

4. You now have the ability to add or remove hardware according to your needs.

Securing the Shoulder Webbing

1. Weave webbing back through sewn-in shoulder strap loop.

2. Install 3-bar plastic slide to webbing so that it's positioned about an inch below rectangular plastic loop.

3. Insert webbing, back to front, through rectangular plastic loop and back around toward 3-bar plastic slide.

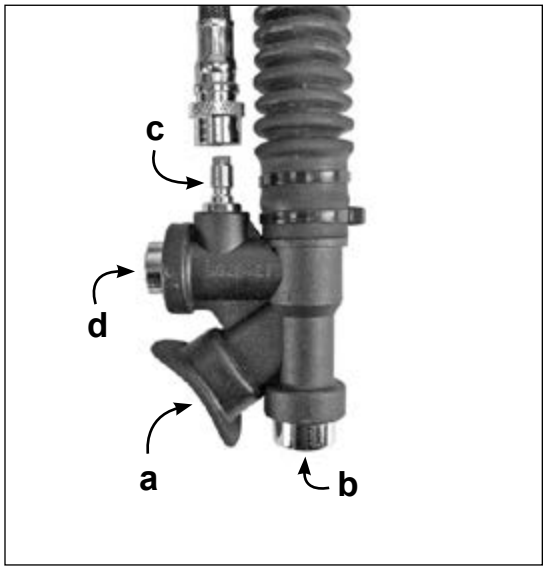
4. Weave webbing through 3-bar plastic slide and tighten, making sure that there is at least 0.5 inches of excess webbing extending past the 3-bar plastic slide.

CAUTION: Failure to correctly reassemble the shoulder strap could cause strap assembly to come undone during a dive, resulting in loss of equipment.

INFLATION METHODS

Inflation via Oral Inflator

To orally inflate your BC, place your lips on the oral inflator mouthpiece ***(a)*** and exhale a small amount of air into the mouthpiece to purge any water that may still be in the housing. While continuing to exhale into the mouthpiece, depress the oral inflator button ***(b)*** to inflate the BC. Immediately after exhaling, release the oral inflator button to prevent air from escaping.



Inflation via Power Inflator

For the power inflator to operate, the medium pressure (MP) inflator hose must be connected. To connect the MP hose, grip the grooved sleeve at the connection fitting with your thumb and forefinger, and slide the sleeve back. Place the fitting over the quick disconnect fitting ***(c)***, and firmly push inward while releasing the sleeve. Check to ensure that the hose is securely attached. After the hose is attached to the power inflator, pressurize the first stage regulator by slowly opening the cylinder valve.

The working pressure of the power inflator is as follows: 103 PSI (7 BAR) minimum - 294 PSI (20 BAR) maximum.

To inflate your BC with medium pressure air, depress the power inflator button ***(d)***. Do not hold the inflator button depressed continuously underwater, as this could cause you to become excessively buoyant. Instead, depress the button in short bursts until you become neutrally buoyant.

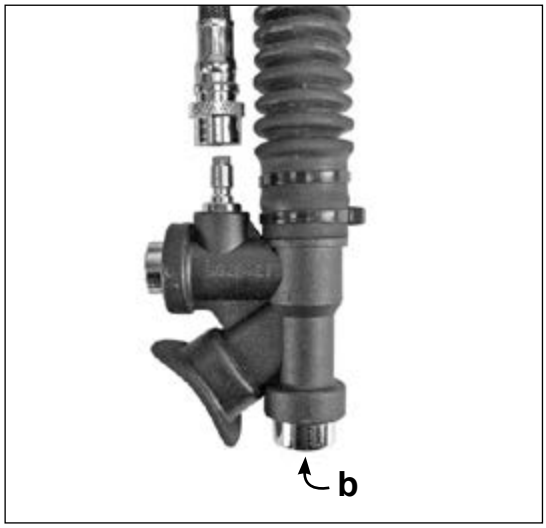
WARNING: Do not rely on the power inflator as the only means to inflate your BC. It is important to practice the technique for orally inflating your BC so that you are prepared for any type of malfunction or out of air situation that could render the power inflator inoperable. You may otherwise be unable to achieve positive buoyancy in an emergency, which could lead to serious injury or death.

DEFLATION METHODS

Throughout the course of a dive, it will be necessary to release air from the BC using one of the two methods described in the following instructions (*if your BC is equipped with a power inflator dump valve, this is a third method of releasing air).* Each method uses a valve that is in a different location. The method you choose at any time may depend on whether you are making your initial descent feet-first, head-first, or maintaining neutral buoyancy underwater. Always remember to utilize the valve that is at the highest point on the bladder, depending on your position in the water.

Deflation via Oral Inflator

To deflate the BC using the oral inflator, lift the inflator body to its highest possible position (above the head). Press the oral inflator button ***(b)*** to start venting air. This method is most effective on the surface when starting the initial descent.



Deflation via Inflator Dump Valve

Your technical airway comes equipped with a standard airway elbow that attaches to a connector on the bladder. Some technical airways may come equipped with an inflator dump valve rather than the standard airway elbow. The inflator dump valve model has a cable inside the corrugated hose that attaches the K inflator to a dump valve at the top of the airway assembly. You can vent air from the BC by firmly pulling straight down on the K inflator. This dump valve provides an effective and convenient way to vent air from the BC while in either an upright or face-down swimming position.

Power Inflator Dump Valve

Standard Airway Elbow

Deflation via Dump Valve / Flat Valve

Your BC comes equipped with a dump valve / flat valve located on the left rear inside of the outer bag. The primary function is to be an over pressure relief (OPR) valve, which releases excess air pressure from inside the bladder. The dump valve can also be opened manually by pulling on the pull knob and cord assembly to quickly dump air.

To dump air as quickly as possible, always use the valve at the highest point in the water column. For example, the dump valve works best while making a head-first descent, or swimming in a face-down position.

NOTE: The WTX-D 60R bladder dump valve / flat valve is located on the right rear side of the outer bag.

CAUTION: The proper function of the over pressure relief (OPR) valve is vital to prevent damage to the BC bladder. Unauthorized service or tampering may render this valve inoperable, and could cause the bladder to leak or burst. This type of damage is not repairable, and is not covered under warranty.

WARNING: Most training agencies recommend that you should descend in an upright, feet-first position, in order to maintain a slower and more controlled descent. This is especially true if you experience difficulty equalizing your ears, or if you are descending in low visibility conditions.

PRE-DIVE INSPECTION

Before each use, the BC must be given a thorough visual inspection and functional test. NEVER dive with a BC that shows signs of damage to its bladder or valves until it has received a complete inspection and service from an Authorized Apeks Dealer or Distributor.

1. Connect the power inflator to a source of clean air, via the MP quick disconnect hose. Depress and release the inflator button intermittently to ensure that the airflow is unobstructed, and that airflow stops completely when the button is released ***(See Inflation via Power Inflator)***.

2. Manually operate the dump valve by pulling on the pull knob and cord assembly to release air from inside the BC, then fully inflate the BC until the (OPR) valve opens ***(See Deflation via Dump Valve / Flat Valve)***. Examine the operation of the (OPR) / dump valve by repeatedly inflating the BC to ensure the valve opens to relieve excess pressure, yet closes immediately afterwards to allow the bladder to remain taut and fully inflated.

3. Check the function of the oral inflator button and (OPR) / power inflator dump valve ***(See Deflation via Oral Inflator / Power Inflator Dump Valve)*** to ensure a rapid and unobstructed exhaust from each valve. Fully inflate the BC once again, and disconnect the power inflator from the compressed air supply and listen for any leaks.

WARNING: If you can hear any leaks, or if the bladder begins to deflate within 10 minutes, DO NOT attempt to use the BC until it has received service from an Authorized Apeks Dealer or Distributor.

NOTE: *If applicable, perform steps 1-3 above on the redundant bladder.*

4. Make a final check of the cylinder band tension to ensure both bands have been secured properly. Re-tighten if necessary.

5. If you have the optional SureLock™ weight system on your BC, check both weight pouches to ensure that they are correctly fastened before entering the water.

WARNING: Loss of the releasable weight pouches can occur if they are not properly secured. Involuntary release of both weight pouches can cause a sudden increase in buoyancy causing a rapid ascent, and could lead to serious injury or death due to arterial gas embolism, decompression sickness, or drowning.

POST-DIVE CARE & MAINTENANCE

With proper care, your BC will provide many years of reliable service. The following preventive maintenance must be performed to extend the life of your BC:

1. Avoid prolonged exposure to direct sunlight and extreme heat. Nylon fabric can quickly fade when exposed to the sun's ultraviolet rays, and extreme heat may damage the welded bladder seams.

2. Avoid repeated or prolonged use in heavily chlorinated water, which can cause the BC fabric to discolor and decay prematurely.

3. Do not allow the BC to chafe against any sharp objects or rough surfaces that could abrade or puncture the bladder. Do not set or drop heavy objects such as block weights on the BC.

4. Avoid any contact with oil, gasoline, aerosols, or chemical solvents.

5. To preserve the life of the bladder, rinse it inside and out with fresh water after every day of use, using the following procedure:

a) Pressurize the power inflator with medium pressure (MP) air via the MP hose.

CAUTION: Before rinsing, ensure that the power inflator is pressurized with air. This will prevent debris and contaminants from entering the valve mechanism if the inflator button is accidentally depressed.

b) Using a garden hose, direct water through the oral inflator mouthpiece to flush the interior of the bladder, and then thoroughly rinse the exterior of the BC.

c) Completely drain the bladder of water, either through the oral inflator or through the over-pressure relief valve.

d) After rinsing, inflate the BC, and allow it to dry inside and out.

NOTE: If applicable, perform step 5 (a-d) above on the redundant bladder.

6. If you have the optional SureLock™ weight system on your BC, thoroughly rinse the SureLock™ weight release mechanism, including the female receptacle and male insert. Visually inspect both parts of the mechanism to make sure they are free of any debris (sand, salt, silt, rocks, etc.) that could hinder the smooth operation of the SureLock™ mechanism. Connect and release the SureLock™ mechanism several times to ensure proper operation.

STORAGE

Store the BC partially inflated, away from direct sunlight and in a clean, dry area. Do not store the BC in an enclosed space, such as a car trunk, where temperatures may fall below 0ºF (-18ºC) or rise above 120ºF (49ºC).

DEALER INSPECTION AND SERVICE

WARNING: DO NOT attempt to perform any disassembly or service of your BC. Service requiring disassembly must only be performed by a factory-trained Apeks technician. To obtain service or repair, such as power inflator service or replacement of the bladder, see an Authorized Apeks Dealer or Distributor.

1. It cannot be assumed that the BC is in good working order on the basis that it has received little use since it was last serviced. Remember that prolonged or improper storage can still result in internal corrosion and/or deterioration of o-ring seals and valve springs, as well as bladder seam degradation.
2. It is imperative that you obtain prescribed dealer service for your BC at least once a year from an authorized dealer, including a general air leak inspection and complete overhaul of the power inflator and (OPR) valve. Your BC may require this service more frequently, depending on the amount of use it receives and the environmental conditions it is used in.
3. If the BC is used for rental or training purposes in salt, chlorinated, or silted fresh water, it will require prescribed dealer service every three to six months. Use in chlorinated water will greatly accelerate the deterioration of most components, and require more frequent service.
4. **DO NOT** attempt to perform any disassembly or overhaul service of your BC. Doing so may cause the BC to dangerously malfunction, and will render the warranty null and void. All service must be performed by an Authorized Apeks Dealer or Distributor.

NOTE: It is important to obtain prescribed dealer service for your BC at least once annually, from an Authorized Apeks Dealer or Distributor. Your personal safety and the mechanical integrity of your BC depends on it.

ANNUAL SERVICE & INSPECTION RECORD

Purchase Date: _____

Store Name: _____

Country: _____

BC Model: _____

Serial Number: _____

WTX Harness: serial # is located under lower plate pouch tab

WTX-D: Serial # is located on upper inside right of outer bag

DATE	DEALER NAME	CITY, STATE	COUNTRY	TECH INITIALS

WARRANTY INFORMATION

All warranty transactions must be accompanied by proof of original purchase from an Authorized Apeks Dealer or Distributor. Be sure to save your sales receipt, and present it whenever returning your BC for warranty service.

LIMITED LIFETIME WARRANTY

Warranty coverage on buoyancy compensators covers the product throughout its useful life, subject to the conditions listed below and utilizes a pro-rated replacement policy*.

Apeks warrants to the original purchaser for the useful life of the product, from the date of purchase, that the product will be free from defects in materials and workmanship, provided that it receives normal use, proper care and prescribed dealer service subject to the limitations listed below. The Limited Lifetime Warranty is extended only to the original purchaser for purchases made from an Authorized Apeks Dealer or Distributor and is not transferable. This warranty is limited to repair or replacement only at the discretion of Apeks.

* PRODUCT REPLACEMENT ON A PRORATED BASIS

Products under the Limited Lifetime Warranty that malfunction due to material or manufacturer defects that have also had a significant amount of use will be replaced on a prorated basis. Prorating will be determined by a percentage factor based on the condition of the product and how long the product was used prior to the warranty claim. This can be useful to evaluate Limited Lifetime Warranty claims since the warranty period is for the “useful life of the product” and not a set length of time. The following guidelines should be used in determining what prorated percentage will be used.

NOTE: This can be a subjective evaluation. Fair and reasonable judgment should be used.

Prorated Values of Products Sold at Retail	Apeks Pays	Customer Pays
Like new and less than 2 years old	100%	0%
Slightly used and less than 5 years old	75%	25%
Very used and /or more than 5 years old	50%	50%
Worn out	0%	100%

WARRANTY LIMITATIONS

Warranty coverage does not extend to damages caused by improper use, improper maintenance, neglect, unauthorized repairs, modifications, accidents, fire, casualty or normal wear and aging.

Cosmetic damage(s), such as scratches, nicks and fraying are not covered under warranty except when the product is new, out of the original packaging.

This warranty does not extend to equipment used for rental, commercial or military purposes.

This warranty gives you specific legal rights. You may have rights which vary from state to state and country to country.

APEKS DISCLAIMS AND EXCLUDES ANY LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES IN THE U.S. AND CERTAIN FOREIGN COUNTRIES DO NOT ALLOW EXCLUSIONS OR LIMITATIONS OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS MAY NOT APPLY TO YOU.

WARNING: It is dangerous for untrained and uncertified persons to use the equipment covered by this warranty. Therefore, use of this equipment by an untrained person renders any and all warranties null and void. Use of SCUBA equipment by anyone who is not a trained and certified diver, or receiving training under the supervision of an instructor, could lead to serious injury or death.